CLINICAL OBSERVATIONS ON FIBROMYOMATOUS TUMORS OF THE UTERUS.[1]

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AMONG a limited number of the fibryomyomatous tumors of the uterus which have altogether come under my observation, I had the opportunity in three instances to see a rather uncommon termination of the disease, namely, in two cases by expulsion of tumor-masses after spontaneous sloughing; in the third case by shrinkage of the tumor after central suppuration and softening. In all of these cases more or less surgical help became necessary to aid the natural process, but all of them, in spite of protracted serious illness, at last ended with recovery, and illustrate in a very eloquent manner, the ability of nature to find, in spite of serious obstacles, its way toward ultimate recovery. The following short histories may sufficiently point out the essential features of these cases.

CASE I.—On the 12th of October, 1883, I saw in consultation with Dr. Schaide, of this city, Mrs. B., then æt. 45, who was suffering from a large abdominal tumor, which had existed for about three years, and by a number of physicians, both here and abroad, had been diagnosticated as fibromyoma of the uterus. To Dr. S. I owe most of the following notes about her history. Mrs. B. had been advised everywhere not to have an operation done on account of the great risk attached to it. Within the last year she had been treated repeatedly for long periods of time with ergot, administered hypodermically as well as internally, but without any noteworthy success, in reference to hæmorrhage as well as size of the tumor. The latter, when I saw the

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patient, filled as a resistant, somewhat irregularly shaped mass, almost the entire abdomen. Having at that time already operated successfully upon several patients with exceptionally large solid uterine tumors, I proposed, in view of the intense suffering of the patient, the radical operation. The patient declined. In the beginning of November her condition became feverish, there appeared an offensive discharge from the vagina, and the patient lost rapidly in flesh. On the 18th of November Dr. S. was able to remove a piece of the tumor about the size of the fist, in a decomposed necrotic condition, from the vagina, which, for the next two weeks, was almost daily followed by others of smaller or larger size. A particularly large piece was extracted from the uterus at the end of November. I then saw the patient again in consultation. To my surprise the enormous tumor had so much disappeared that the uterus now was not larger than at about the fourth or fifth month of pregnancy. There existed still a very offensive discharge, which, however, ceased very promptly, after I had extracted from the uterine cavity the remainder of an entirely separated mass of tumor. The offensive smell of this sloughed tissue was beyond description. The uterine cavity was disinfected as thoroughly as possible, and disinfecting irrigations kept up for some time after. The patient, though very much run down, made a rather rapid recovery and was able, four weeks later, to see Dr. S. at his office. The latter had the kindness to inform me that Mrs. B. is now in perfect health. About a year ago her menses, which had become quite normal, ceased. There is no recurrence of the tumor, and the parts seem to be in an almost normal condition. So far as I remember, the mass of the tumor at my first visit must have weighed at least fifteen to twenty pounds.

CASE II.—Mrs. H., æt. 46, who had never been pregnant, consulted me in October last. Though otherwise in good health, she had suffered for the last two years from profuse and prolonged menstruation, now and then associated with severe pains in her back and vomiting. Within the last month, a few days before and after menstruation, a white discharge appeared. There was no doubt that her trouble was due to a fibromyomatous tumor of such size that the uterus, on examination, reached within about two fingers' breadth of the umbilicus. During the time from the 12th of October to the 6th of November about eighteen hypodermic injections of Squibb's fluid extract of ergot were administered in the hypogastric region. They caused a good deal of pain and inflammatory irritation, which, however, by cold applications was kept down, so that no abscesses occurred. Small indurations, however, remained at the points of injec-

tion. During the menstrual period the patient rested at home, did not get any hypodermic injections, but took the ergot internally, 15 to 20 drops twice a day. On the 14th of December I was called to see Mrs. H. at her house. She had a bloody, somewhat offensive discharge from the vagina, and suffered from great restlessness and pain of labor-like character. The vaginal portion of the uterus was softened and dilated, and a soft mass could be felt within it. On the following day, under chloroform, a considerable mass, about a pound and a half, of sloughed fibromyomatous tumor was removed from the uterine cavity, after lateral incisions into the vaginal portion had been made. On account of the narrowness of the sexual passages and the impossibility of pulling down the uterus, I could not pass my finger high up into the uterine cavity. But I was able to ascertain that a good many necrotic irregular pieces of tissue remained undetached as yet. Two drainage tubes were introduced into the uterus, and repeated irrigations made with a warm solution of salicylic and boracic acids, and once or twice a day of corrosive sublimate solution 1 : 5000. But in spite of my endeavors, I did not succeed in preventing further decomposition. The drainage tubes were so often closed by small particles of necrotic tissue that they did not act satisfactorily. Besides that, their presence in the internal orifice seemed to be the source of constant irritation. I therefore removed them, and applied irrigation several times a day, by passing a Fritsche's uterine irrigator high up into the uterine cavity, usually injecting, first a stronger solution (1:2000) of corrosive sublimate, followed by injection of bor-salicylic acid, according to Thiersch's prescription.

Very soon, under repeated chills and high fever, the palpable symptoms of peri- and para-metritis set in. Especially in the cavum Douglasii, where a fibroma, inserted at the supravaginal portion of the cervix, was felt before, a diffuse infiltration and exudation could be made out, pushing the lower portion of the uterus toward the symphysis. Dr. Noeggerath was called in consultation, and was likewise convinced of the extremely precarious condition of the patient. It was decided to renew the attempt to remove the source of infection from the uterine cavity, and on the 23d of December, in the presence and with the kind help of Dr. Noeggerath, sloughed masses, much less, however, than the first time, were again removed, partly by forceps, partly by curette. It was discovered that from the anterior as well as the posterior aspect, tumor-like prominences protruded toward the uterine cavity, and that the process of sloughing was particularly seated posteriorly and toward the fundus. The uterus, by this time, had al-

ready become considerably reduced in size. On the 5th of January I made a deep incision into the exudation through the posterior cul-de-sac, evacuating pus mixed with small pieces of necrotic tissue, as I supposed, from the centre of the fibroma which had undergone suppuration, and from that time, while the discharge from the uterus became gradually less, and almost daily small pieces of necrotic tissue were expelled, the patient's condition became decidedly better. Several times slight hæmorrhage accompanied the expulsion of sloughs. At present, for more than a month, the discharge has entirely ceased. The uterus is very little larger than its normal size. There is still a decided induration at the seat of the para- and peri-metritic inflammation, which, however, is gradually diminishing. The general condition is very good, and twice already, if I am not mistaken, the menstrual flow has appeared again, normal in quantity and duration. Mrs. H. is now 47 years of age, and certainly very near the end of her menstrual life. I think there is very little probability that a new formation of fibromyomata will occur. I am under the impression that in this case the whole mass of the tumor had not sloughed, but that several lumps, together with the gradual contraction of the uterus, have disappeared either by atrophy or fatty degeneration. It seems, further, that in this case the administration of the ergot had a causal relation to the necrosis and elimination of the main part of the tumor.

CASE III.—Miss B. L., 28 years of age, was in good health until four years ago, when she began to suffer from profuse menstrual hæmorrhage and pain in her back, which were ascribed by a physician as due to the presence of a uterine tumor. For about three months she was treated with hypodermic injections of ergot, altogether about thirty in number, but without success. Three years ago, in making a forced attempt to prevent herself from falling down by throwing herself backward, she felt a severe pain in the abdomen, and had the sensation as if something had been torn; the pain in her abdomen persisted during the summer. Ergot, internally, was used again, but gave her no relief. In September, 1883, I saw the patient in consultation with Dr. Dieffenbach, when she presented a deep-seated phlegmon of the abdominal wall, apparently in the retroperitoneal space below the umbilicus. On the 15th of September, through an incision in the linea alba, a great quantity of pus was discharged; a drainage tube was passed at one point to such a depth, into a rather small appendix of the cavity, as to allow of the conclusion that it must reach some distance into the abdominal cavity. After some time, when infiltration and pain had sufficiently ceased, it could be made out that a uterine tumor, origi-

nating from the fundus of the uterus, was adherent to the abdominal wall, and that a pus cavity passed to some distance into its mass. Suppuration went on for several months, and the tumor gradually decreased in size, having presented originally about the dimensions of a small child's head. Small, irregularly shaped calcareous masses were repeatedly washed out or extracted from the bottom of the wound. On the 31st of December, 1883, after having enlarged the existing opening, I removed from the rather narrow cavity by scraping, elevator, forceps and finger, quite a considerable quantity of calcareous spiculæ, shells and irregular shaped bodies, in all perhaps as much as a tablespoonful. Four weeks later cicatrization was complete, and since then the patient has enjoyed perfect health. A hard lump in connection with the scar, about the size of a duck's egg, can be still felt, but does not cause the slightest inconvenience, while menstruation has at all times been normal. I cannot say what connection exists at present between the tumor and the uterus, the patient not having undergone an examination of sufficient thoroughness. It seems in this case, through an injury, perhaps by partial rupture of the insertion of the tumor, its nutrition has been interfered with until finally central softening with suppuration occurred, which gradually led to its diminution and arrrest of growth and development. No medical treatment was used after the operative interference.

Though quite a number of cases are on record in which, after the manner described in the preceding histories, fibromyomatous tumors have disappeared, they are rather exceptional, and withal this natural way of healing is not free from danger, no small percentage of cases ending fatally. We are, therefore, in no way entitled to trust to such an exceptional and unreliable course of the disease so far as to give it any important weight in regard to our prognosis of fibromyomatous tumors of the uterus. We know only too well that sometimes these tumors will have an unbounded development, and, after they have attained a certain size, become dangerous, and in an imperative way demand our surgical help, and that so much more as in these cases medicinal treatment is usually nothing but loss of time.

With reference to the question, how far the extirpation of the ovaries may effectually check the development of fibromyomatous tumors, I am unable to give a satisfactory answer

from my own experience. I have attempted the operation once, but only to find out that in that case the removal of the ovaries would have been a very tedious operation, and probably not much less dangerous than the removal of the whole mass. In those five cases in which so far, I have seen the necessity of performing supravaginal amputation of the uterus for the disease in question, the tumors were of such uncommon size, and were mostly so complicated by adhesions, that it would have been no easy thing at all to get the ovaries, and this, together with the question whether, in such cases, castration promises the desired result, has led me in all of those five cases to give preference to the radical method of operating. All have ended in recovery; two of them have been reported to this Society in previous years, one being complicated with pregnancy; the third one was operated on about a year and a half ago; of the last two cases which have been operated upon in the course of this year, I present before you the tumors removed. With reference to the third of the before-mentioned cases, I would say that it was that of a married lady of about 33, who for several years at every menstrual period had bled so abundantly as to become quite anæmic, her whole way of living finally being devoted to the purpose of building herself up to withstand the drain of the next menstruation. She suffered repeatedly from very alarming attacks of weakness of the heart, which seemed to be dilated in its right half, and there was no doubt that, every other remedy having proved ineffectual, she would finally have died from the consequences of a fibromyomatous degeneration of the uterus, which, as the specimen afterwards proved, consisted of a large number of tumors of different size and location, massed together in the different layers of the uterus, and forming a tumor of the size of the uterus in the seventh month of pregnancy.

The operation was performed in the same manner that I am about to describe in the following cases, and recovery took place without any untoward symptom, except that about two months after the operation the elastic ligature by which the stump of the uterus had been secured, passed away through the external os. The lady is now in flourishing health. About

nine months ago she passed a considerable quantity of blood with her urine for three or four days, with some feeling of pain in her back and a general sensation as if she had her period. The urine afterward became normal, and, so far as I know, no such hæmorrhage has recurred. She pretends to enjoy sexual intercourse without impairment as compared with her healthy period of married life before the operation. Lately she has become rather stout.

CASE IV.—In January of this year Miss W., 33 years of age, consulted me for an abdominal tumor which had been noticed for the past three years, but only lately attention had been called to it, by its more rapid growth and large size having been the source of disturbance. The whole abdomen seemed to be occupied by a resistant, rather smooth tumor reaching from the os pubis high up to the epigastrium and the free border of the ribs. The tumor was very movable and allowed of passing the fingers partly under it toward the entrance of the small pelvis, so that on the first examination it did not seem to take its origin from a pelvic organ, though its movements were communicated to the uterus. A closer examination, however, revealed a connection with the fundus uteri, and made the diagnosis of a pedunculated fibrous tumor the most probable.

In this case the operation was comparatively simple. Though it would have been possible to remove the tumor without sacrificing the internal sexual organs, I still deemed it advisable to perform the supravaginal amputation for the following reasons: First, I thought of the possibility, that from its rapid growth within the last months the tumor might have assumed a more malignant character; and secondly, several small beginning fibromata could be distinguished lower down within the walls of the uterus which, if left behind, would have developed further and perhaps more rapidly.

The operation was performed in the following manner: Through an incision in the linea alba reaching from the epigastrium almost down to the symphysis pubis, the tumor was slowly and without difficulty brought before the abdominal walls; the adhesions were but very slight. Enormously dilated veins occupied the broad ligaments. Then from both sides in a horizontal direction the broad ligaments were tied

in several portions between two ligatures until close to the lateral edges of the uterus, and cut across. I then passed an elastic ligature under the peritoneal covering of the cervix uteri, and tied it by means of coarse silk thread. About 3 cm. above this ligature the uterus was amputated and thus the whole mass removed. The tissue of the stump was then excised in the shape of a funnel, so that the mucous membrane was removed as low down as the elastic ligature permitted. At the deepest point the actual cautery was applied and a small quantity of iodoform powdered over the eschar. The funnel was then closed by a number of deep catgut sutures, between which the peritoneal covering was adjusted by superficial ones. The ends of all the ligated tissues were then cauterized, sprinkled with iodoform, and the abdomen closed by peritoneal and other sutures in the usual manner. The patient had a very rapid recovery almost without any feverish reaction, and is so far entirely well.

In a case like this the operation does not present any great difficulty, nor does it involve any particular danger if only proper care is taken not to expose the patient to an unnecessary loss of blood. I think the patient, apart from the blood that was contained within the removed parts, lost hardly more than an ounce of blood. The way of passing the elastic ligature beneath the peritoneum was intended to secure a certain amount of nutrition for the stump. The latter, in fact, did not become entirely bloodless, but presented, during the act of being tightly closed up by stitches, some slight oozing which, however, was checked by the sutures.

The weight of the tumor now, after a five month's preservation in alcohol, is nine and a half pounds. It is throughout all its substance a fibromyoma.

The second specimen, which I present here, was obtained by an operation of much more seriousness and difficulty. In fact, the operation was only undertaken at the urgent request of the patient.

CASE V.—Miss L., 33 years of age at the time of operation, had from her twenty-sixth year suffered from abundant menstrual hæmorrhage due to a tumor. She was treated with hypodermic injections of ergot, some of which, she states, were injected into the mass of the tumor itself and gave rise to an intense peritonitis which lasted for six

weeks. No relief followed. The tumor gradually increased in size. Within the last months her suffering had become most intense. She had constant pain: was hardly able to walk; her digestion became impaired, and she lost rapidly in strength and flesh. The external examination revealed the presence of hard, lumpy, irregular masses in the lower part of the abdomen, which, on the left side, extended close to the border of the ribs. A large portion of the tumor could be felt from the vagina reaching far down into the small pelvis, displacing the os uteri toward the symphysis pubis and pushing it in an upward direction. Everything seemed fixed and immovable. On the 11th of January the tumor was removed. Gradually the numerous adhesions with the anterior abdominal wall, the omentum, and intestines were removed. There existed venous vessels in such quantity and of such enormous size as I have never seen before, and requiring careful ligation. A great difficulty was experienced in shelling out that part of the tumor, which on both sides had grown under the peritoneum between the layers of the broad ligaments. At last the cervix uteri was reached, an elastic ligature applied, and the mass removed. The rather free hæmorrhage from the extensive raw surface, which corresponded to the subserous attachment of the tumor, was at last checked by ligatures, sutures, and the actual cautery. A careful toilet of the peritoneum followed, and the abdomen was closed. Repeatedly during the operation the patient had very alarming attacks of heart-weakness, which obliged me to interrupt the operation and at one time apply artificial respiration. It seemed to me that these attacks depended on forced tractions which could not very well be avoided during the attempt to get under the immovable and fixed mass.

In this case the cervix uteri was entirely void of peritoneal covering, which had been lifted from it by the adjacent subserous tumor masses. The mucous membrane of the cervix was excised as in the case before, but the indication to finish the operation was so urgent that I had to desist from any further details in treating the stump of the uterus. Altogether the operation had lasted about three hours and a half. The patient had a very protracted convalescence disturbed by peritonitis and the formation of an abscess, which discharged itself spontaneously through the cervical channel. Another abscess formed itself near the anterior abdominal wall, and was opened in the line of the original incision, leaving a fistula. On the 24th of April I dilated the cervix on account of persistent offensive suppuration, and extracted quite a number of coarse silk ligatures, but was unable to find the elastic ligature, which apparently was safely encysted. Several other ligatures were re-

moved through an incision in the abdominal wall a few centimetres to the left of the original cut, and since then the discharge has almost entirely disappeared; the patient does not suffer any more, and can be regarded, I think, as definitely convalescent. The weight of the alcohol specimen is ten pounds.

I may be permitted to add, that a patient from whom I removed the uterus for myxosarcoma about four or five years ago, and whose specimen and history were presented before this Society, is so far enjoying good health. I saw her about one year ago, and there was no evidence of any recurrence of the disease. She promised to let me know if in any way she should be troubled.

I should also like to mention a case of multiple fibromyomata of the uterus, in which my operative efforts were not followed by such good fortune:

CASE VI.—A recently married woman of about 30 years, nullipara, had been suffering similarly to the above-mentioned patients during her menstrual period. Lately a great deal of pain and tenderness in the hypogastric region had supervened, and the patient, asking for a radical curative effort, and having exhausted other treatment without success, was subjected to laparomyomotomy. Two pedunculated fibromata about the size of a small fist were found, arising from the fundus uteri; the one impacted in Douglas's space was easily recovered after ligating the pedicle. The other, to the right side of the uterus and in front of the broad ligament, had become necrotic in consequence of torsion of its pedicle, and was imbedded in a sac of adherent peritoneum, which, however, could be detached without great difficulty. There was no exudation of pus or fluid. The tumor looked gray, with a greenish tint, and contained no fluid blood. I tried to tie the pedicle within its living part, but a small necrotic portion remained beyond the ligature. A third myoma, about the size of a small hen's egg, was broadly inserted on the anterior wall of the uterus right above the cervix, and for its removal and shelling out a thin layer of uterine tissue had to be severed. There was considerable capillary oozing from the bed of the tumor, and the efforts to check the hæmorrhage by Paquelin's cautery, stitches and ligation, made the operation prolonged. Death occurred on the third day, apparently from septic peritonitis. No autopsy was conceded.

I presume infection may have started from the place where the necrotic fibroma was embedded. Here, perhaps, infectious germs existed, which, though made harmless for the time by the adherent peritoneum, were set free by the operation, and found outside of their prison very favorable chances for their deleterious action. The torsion of the pedicle illustrated very beautifully the way in which such tumors at last might be deprived of their blood supply, and finally undgo retrogressive metamorphosis.

With reference to the supravaginal amputation of the uterus I should like to mention, in a few words, the different ways in which the uterine stump is secured and treated. Thus, as previously in ovariotomy, the extra- and intra-peritoneal method stand against each other, and on both sides equally good results are obtained. Schröder and Martin, in their very extensive practice, trust to tight suture of the stump after funnel-like excision. Schröder first advised étage suture. They do not use the permanent elastic ligature, and are strong advocates of the intraperitoneal treatment. So is Olshausen, who uses the elastic ligature, Rose, and others; while extraperitoneal treatment is given preference by Hegar, Kaltenbach, Péan and others, as involving less risk in reference to septic poisoning, and leaving the stump accessible in case of secondary hæmorrhage.

There exists, perhaps, no more striking illustration of the safety of aseptic proceedings than the fact that such large masses of tissue as the ligated stump of the fibromyomatous uterus can be left in the abdominal cavity, deprived of blood supply, without undergoing decomposition, and giving rise to infection. On the other hand, it cannot be doubted that a certain amount of risk will always be attached to their way of acting, and that those methods which secure nutrition to the stump with intraperitoneal treatment will have to be regarded as the most proper ones. That good results can be achieved by the extraperitoneal method nobody will doubt, and repeatedly successful cases of it have been reported to this Society. I am, however, convinced that, by-and-by, just as it has been with ovariotomy, the intraperitoneal treatment will be more

and more adopted. I should certainly give preference to Schröder's method of securing the stump by tight étage sutures, above all others, if with reference to hæmorrhage I should regard it as free from all danger. It may be safer in the hands of operators, who are working on such a large scale as Schröder and Martin do. I must myself concede, that heretofore only the apprehension of a possible hæmorrhage has prevented me from following them. In order to combine the advantages which the elastic ligature offers in regard to hæmorrhage, with those offered by suturing the stump, I have tried in one of the above cases, to apply the ligature beneath the peritoneum, so that a certain amount of blood can be furnished to the stump through its peritoneal covering, which, of course, must be detached as little as possible above the ligature. Further observations will have to be made, in order to ascertain whether this procedure will always yield as good results as it has in my case as above recorded.

One mechanical contrivance I would mention, and of which I like to make use in all abdominal operations wherever practicable, is Thiersch's ligature spindles, with or without holder, which I have presented at a former meeting of this society. They are, indeed, very handy, and allow of securing pedicles and fleshy adhesions with more constricting force, than can be exerted in the ordinary way of tying.

The abdominal incision ought to be long enough to allow of an easy access to the operating field. I certainly prefer too large an incision, to one which obliges the operator to work in the dark, or to do uncertain manipulation. For this latter reason, often one of the principal dangers in these operations is incurred, namely, unnecessary and abundant loss of blood, simply because the operator does not in time and with easiness get at the bleeding point. If one has seen those enormously dilated veins in these tumors, one must be convinced that bleeding from such a vessel for a very short time must be sufficient to endanger life. For this reason, also, every undue tearing force ought to be avoided, and it is safer and more wise to work slowly and cautiously, than to hurry at unnecessary hazard. The length of the abdominal incision adds almost noth-

ing to the danger and gravity of the operation, and incisions of fifteen or more inches will heal without difficulty. To obviate loss of warmth from extensive denudation of intestine, the use of large, flat sponges dipped in a weak aseptic fluid seems to me the most commendable.